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ABSTRACT

This study uses National Longitudinal Survey of Youth (NLSY) data to analyze differences in black and white child poverty. The NLSY documents family income and underlying conditions such as employment, educational attainment, welfare use, and marriage or divorce. This analysis examines: time in poverty, time on welfare, time in a single parent home, mother's math and verbal skill level, number of children born to the child's mother, mother's age at first birth, regional variables, rural residence, and racial group. Results indicate that welfare dependence and single parenthood are the major underlying factors producing child poverty. Increases in time on welfare, time in a single parent family, and number of siblings lead to increases in a child's time in poverty. Increases in a mother's math and verbal skills lead to decreases in a child's time in poverty. Race per se is not a significant factor in directly increasing child poverty. Black children have the same poverty rate as white children who are raised in similar circumstances. However, black children are more likely to be poor than white children primarily because they are more likely to live in single parent homes and be on welfare. Technical specifications are appended. (SM)

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UNDERSTANDING DIFFERENCES IN BLACK AND WHITE CHILD POVERTY RATES

ROBERT RECTOR, KIRK A. JOHNSON, AND PATRICK F. FAGAN

INTRODUCTION

High rates of child poverty in the United States are a continuing concern. The fact that poverty is considerably more common among black children than it is among white children has intensified this concern. In 1999, according to the U.S. Bureau of the Census, 33.1 percent of black children lived in poverty compared with 13.5 percent of white children.[1]

This *CDA Report* attempts to identify the primary causes of child poverty in the United States, using the National Longitudinal Survey of Youth, a representative sample of Americans produced by the U.S. Department of Labor.[2] We also examine the differences in black and white child poverty and seek to uncover the causes of those differences. This analysis reveals the following:

- The major underlying factors producing child poverty in the United States are welfare dependence and single parenthood.
- Race *per se* is not a factor in producing child poverty; race alone does not directly increase or decrease the probability that a child will be poor.
- When a black child is compared with a white child raised in identical circumstances, both children will have the same probability of living in poverty.
- Similarly, when whites with high levels of single parenthood and welfare dependence (matching those typical in the black community) are compared to blacks, the poverty rates for both groups are nearly identical.
- Black American children are more likely to live in poverty than are white children, primarily because black children are far

1. U.S. Bureau of the Census, *Poverty in the United States 1999, Current Population Reports Series P60–210* (Washington, D.C.: U.S. Government Printing Office, September 2000), pp. 28, 29. The conventional Census poverty figures are artificially inflated by the fact that welfare benefits such as Food Stamps, the Earned Income Tax Credit (EITC), and public housing are not counted as income. If Food Stamps, the EITC, and public housing subsidies are counted as income, and Medicaid is partially counted, the poverty rate falls to 21.6 percent for black children and 9.0 percent for white children. *Ibid.*, pp. 29, 31. No matter how poverty is calculated, a large disparity between blacks and whites will remain. For an assessment of the measurement of poverty, see Robert Rector, Kirk Johnson, and Sarah Youssef, "The Extent of Material Hardship and Poverty in the United States," *Review of Social Economy*, September 1999, pp. 352–387.

2. The National Longitudinal Survey of Youth, produced by the U.S. Department of Labor's Bureau of Labor Statistics, was first conducted in 1979. Participants between the ages of 14 and 22 in 1979 were re-interviewed in subsequent years. See Appendix for more on the methodology. For additional information on the NLSY, see *http://stats.bls.gov/nlshome.htm*.

more likely to live in single-parent families and to be on welfare.

Black and white Americans differ dramatically in marriage patterns and welfare dependence. In 1999, 68.8 percent of black American children were born out of wedlock. By contrast, the out-of-wedlock birth rate for white Americans was 26.7 percent.[3] Similarly, black children were five times more likely to be dependent on welfare from the Aid to Families with Dependent Children (AFDC) program[4] than white children. Since single parenthood and welfare dependence are the primary factors producing child poverty in the United States, any meaningful strategy to reduce the disparities in black and white child poverty must focus on increasing marriage and reducing welfare dependence among blacks.

DESCRIPTION OF SAMPLE AND VARIABLES

This study analyzes differences in black and white child poverty based on data from the National Longitudinal Survey of Youth (NLSY), a large-scale multi-year national survey funded by the U.S. Department of Labor and other federal agencies. The NLSY is a statistically valid sample of 12,686 young men and women who were between the ages of 14 and 22 when they were first interviewed in 1979. These individuals have been re-interviewed continually since then and are now in their thirties and forties. This Heritage study covers events in the lives of these individuals between 1979 and 1996.

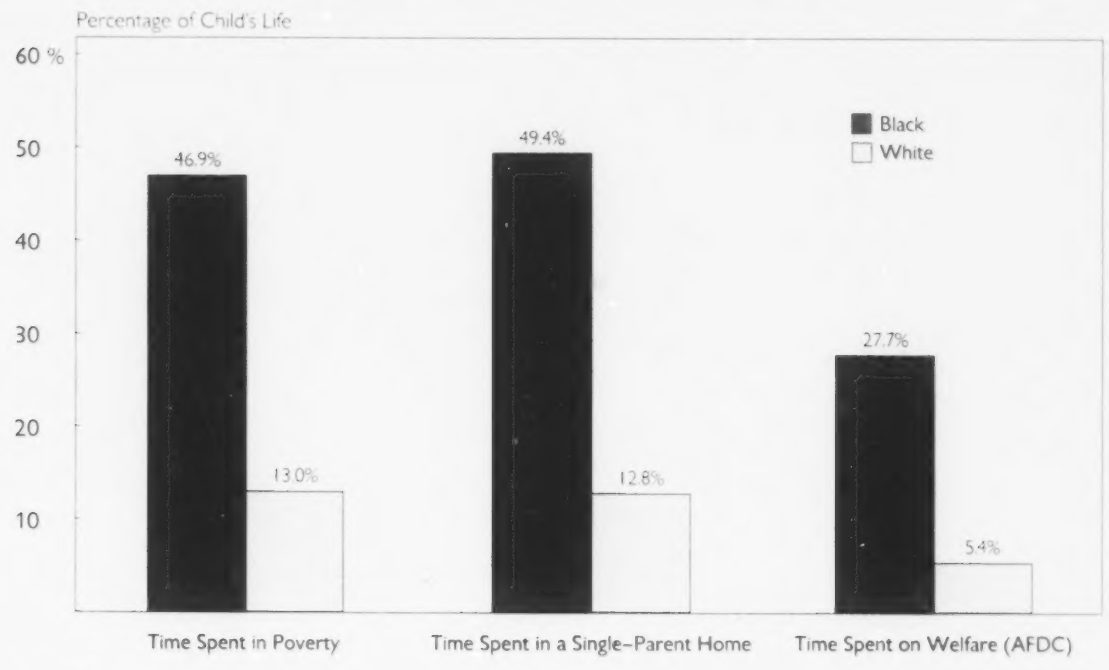
The NLSY records births to these individuals and provides detailed information on the children in each year after birth. The survey thus provides a wealth of data on children born in the United States during the past two decades.[5] The NLSY data document not only family income year by year, but also underlying conditions such as employment, welfare use, educational attainment, and marriage or divorce. Thus, the NLSY provides a robust set of data with which to analyze the causes of child poverty.

This analysis focuses on the following variables derived from the NLSY data.

- **Time in poverty:** The time a child has lived in poverty as a percentage of the total years of the child's life. Thus, if the child is 10 years old and has lived in poverty five of those years, the time in poverty would be 50 percent.
- **Time on welfare:** The percentage of months of the child's life spent in a household receiving Aid to Families with Dependent Children (AFDC) benefits. Thus, if the child is 120 months old and has lived in a family on AFDC for 30 of those months, the time on welfare would be 25 percent.
- **Time in a single-parent home:** The percentage of a child's life spent in a single-parent home as opposed to a married-couple home. Thus, if a child has lived with a never-married mother all his life, the time spent in a single-parent home would be 100 percent.
- **Mother's math and verbal skill level:** The mother's math and verbal performance level relative to the rest of the population. To compute this score, all individuals were ranked, based on math and verbal skill levels, into percentiles from 0 to 100. A parent's percentile score of 30 means that 29 percent of the population had scores below the parent and 70 percent had scores above.[6]
- **Number of children:** The number of children ever born to the child's mother.
- **Mother's age at first birth:** The mother's age at first birth, with age counted in years above age 15. Thus, if a mother has a score of 5, she was 20 years old at the time of first birth.
- **Regional variables:** A set of four variables measuring the percent of time a child has lived in each region.[7]

3. Sally Curtin *et al.*, "Births: Preliminary Data for 1999," *National Vital Statistics Reports*, U.S. Department of Health and Human Services, National Center for Health Statistics, Vol. 48, No. 14 (August 8, 2000), p. 2.
4. In 1997, the AFDC program was renamed the Temporary Assistance to Needy Families (TANF) program.
5. There were 6,120 children born to NLSY recipients between 1979 and 1996. In 1996, the average age of these children was nine years.
6. In the NLSY, math and verbal skill or ability level is measured by the Armed Forces Qualifying Test (AFQT).

Chart 1 CDA 01-04



Source: Center for Data Analysis, The Heritage Foundation, and the Bureau of Labor Statistics, National Longitudinal Survey of Youth, 1979–96.

- **Rural residence**: A dichotomous variable measuring whether the child lived in a non-urban area in 1996

- **Racial groups**: Black, white, and other.[8]

DESCRIPTIVE STATISTICS

Table 1 and Chart 1 show the statistical means for the variables listed above for both black and white children in the NLSY. Black children lived in poverty for 46.9 percent of the time since birth, while white children lived in poverty for 13.0 percent of their lives. (Note: NLSY poverty figures in Table 1 do not match the Census figures noted above because the figures measure different concepts. The Census figures measure the percent of children who were poor in a single year: 1999. The NLSY figures measure the average percent of time children in the sample lived in poverty since birth.)[9]

Black children on average spent 49.4 percent of their lives in single-parent families, compared with 12.8 percent for white children. While black children on average spent 27.7 percent of their lives receiving AFDC, the figure was 5.4 percent for white children. Black mothers in the NLSY had math and verbal skill levels at the 19.7 percentile. By contrast, the average white mother had skill levels at the 52.5 percentile.

7. Variables are provided for South, Northeast, and West. North Central was the default condition. The variables measure the percent of the child's life spent in each region.
8. In the regressions, black and other are treated as dichotomous dummy variables and white as the default condition.
9. Children in the NLSY were born largely between the early 1980s and mid-1990s; the poverty figures in Table 1 thus reflect the poverty rates that were typical during that period.

Black mothers in the NLSY sample gave birth to their first child at an average age of 19.9 years, while white mothers on average had first births at 23.4 years. Black mothers had, on average, 3.05 children while white mothers had 2.6 children. Black children spent more time residing in the South than did white children (56.9 percent to 30.1 percent).

Table 1 CDA 01-04

Descriptive Variables Used in the Analysis

	Black Children	White Children
Percent of Life in Poverty	46.9%	13%
Percent of Life in a Single-Parent Family	49.4%	12.8%
Percent of Life on AFDC	27.7%	5.4%
Mother's Math and Verbal Skill Level (Percentile Rank)	19.7	52.5
Average Mother's Age at First Birth	19.9 years	23.4 years
Number of Children Born to Mother	3.05	2.6
Residence in Rural Area	15%	27%
Percent Time Residing in South	56.9%	30.1%
Percent Time Residing in Northeast	14.7%	18.8%
Percent Time Residing in North Central	21.4%	33.5%
Percent Time Residing in West	7.0%	17.6%

Regression Analysis

The goal of this analysis is to determine the proximate social and economic causes of child poverty in the United States. In addition, the authors seek to determine whether a child's race affects the frequency of poverty independent of other social and economic variables. In other words, is a black child more likely to experience poverty than a white child with similar characteristics in terms of time on welfare, residence in single-parent homes, number of siblings, and other variables?

To answer these questions, a regression analysis was performed with "time in poverty" as the dependent variable. The independent variables used to explain the probability of poverty were race, time on welfare, time in a single-parent home, mother's math and verbal ability level, number of children in the family, age of mother at first birth, regional residence, and rural residence.

Some might suggest that time in poverty in an abstract sense could be treated as an independent variable and time on welfare as the dependent variable, contending that since only low-income persons receive welfare, it is a lack of income that causes welfare dependence rather than the opposite. Such an assessment is based on a lack of understanding of the operation of welfare programs.

For most of the history of Aid to Families with Dependent Children, a practical precondition for receipt of benefits has been that a mother worked little or not at all. Typically, only about 6 percent to 10 percent of AFDC mothers were employed while receiving benefits, and those who were employed generally worked few hours. Thus, to be on AFDC in most cases meant the family was without earned income. Since the value of the AFDC benefits was generally below what the mother could potentially earn from employment and below the poverty threshold, being on welfare led to an increased rate of poverty.

Moreover, more generous monthly welfare benefits are linked to larger caseloads and greater periods of time spent on welfare. Dr. June O'Neill, former director of the Congressional Budget Office, has found that a 50 percent increase in monthly AFDC and Food Stamp benefit levels leads to a 75 percent increase both in the number of women enrolled in AFDC and in the number of years spent on AFDC. Thus, conventional welfare programs, by pulling mothers out of the labor force, reduce earned income and dramatically increase child poverty.[10]

10. See M. Anne Hill and June O'Neill, *Underclass Behaviors in the United States: Measurement and Analysis of Determinants* (New York: Center for the Study of Business and Government, Baruch College, City University of New York, 1993); research funded by U.S. Department of Health and Human Services grant #88ASPE201A.

Table 2 CDA 01-04

Regression Analysis of Percent Time in Poverty

Effects of Independent Variables

	Unstandardized Coefficients B	Std.Error	Standardized Coefficients Beta	t value	Significance
(constant)***	7.123	1.202		5.926	0.000
Percent Time in Single-Parent Family***	0.208	0.009	0.227	22.159	0.000
Percent Time on AFDC***	0.686	0.014	0.511	48.625	0.000
Mother's Math and Verbal Skill Level***	-0.157	0.011	-0.144	-14.224	0.000
Number of Children Ever Born***	3.068	0.249	0.115	12.333	0.000
Number of Years at First Birth Above 15***	-0.380	0.068	-0.056	-5.610	0.000
Percent Time Living in Northeast***	0.027	0.008	0.032	3.458	0.001
Percent Time Living in South***	0.056	0.007	0.081	8.206	0.000
Percent Time Living in West	0.009	0.008	0.011	1.148	0.251
Lives in Rural Area***	2.322	0.595	0.033	3.905	0.000
Race = Black	1.213	0.849	0.014	1.428	0.153
Race = Other	2.167	1.440	0.013	1.505	0.132

Analysis of Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F value	Significance
Regression	13,287,489,597	11	1,207,953,600	896.556	0.000
Residual	7,399,516,125	5492	1,347,326		
Total	20,687,005,722	5503			

Explanatory Power of Model

R	R Square	Std. Error of the Estimate
0.801	0.642	1160.744

Note: * Significant at more than a 90 percent level. ** Significant at more than a 95 percent level. ***Significant at more than a 99.9 percent level.

Source: Center for Data Analysis WLS calculations of data from the National Longitudinal Survey of Youth, 1979-96

Finally, when the welfare system entices a woman out of the job market, she loses work experience that could lead to future wage increases. The loss of work experience thus can reduce future earnings potential and increase the prospects of further poverty even after the family has left welfare. Overall, rather than a lack of income inducing non-employment and dependence, it is the lack of earnings inherent in welfare dependence that produces the family's poverty.

The results of the regression are shown in Table 2. The R square of the regression is .64, indicating that the model is able to explain 64 percent of the variation in child poverty in the NLSY sample. Time on welfare and time in a single-parent home were found to have strong significant effects in determining the amount of time a child would live in poverty. The number of children in the family, the mother's math and verbal skill level, and the age of the mother at first birth also had clear significant effects on child poverty rates, although the magnitude of these effects was smaller than the magnitude of welfare dependence and single-parent variables. More children in the family led to more time in poverty. By contrast, higher ability levels of the mother and being older at first birth led to decreases in child poverty.

The regional variables show mixed results. In each case, residence in the South, Northeast, and West was compared with the base or default condition of residing in the North Central region. Residing in the South, where wage rates historically have been lower than in the rest of the country, had a statistically significant effect in raising poverty rates. Residing in the Northeast also had a smaller but still significant effect. By contrast,

residing in the West did not have a statistically significant effect on child poverty. Residing in a rural area raised the probability of child poverty by a small but statistically significant amount.

Finally, the regression included three racial categories: white, black, and other. White was treated as the default or baseline condition against which black and other were compared. The lack of effect of the racial variables is striking. Both black and other race were shown to be very weak variables without statistically significant effects on poverty. Thus, race *per se* was found to have no direct bearing on child poverty. If a black child is compared to a white child who is identical with respect to the other variables shown, the poverty rate of the two children will be, on average, nearly identical.

As Table 1 shows, blacks have higher levels of nearly all the variables that contribute directly to child poverty in the regression. Blacks have higher rates of welfare dependence, single parenthood, more children per family, and lower parental math and verbal skill levels. Blacks give birth at a younger age and are more likely to live in the low-wage South.[11] It is the differences in these variables, particularly welfare dependence and single parenthood, that cause the large differences in child poverty between blacks and whites.

Relative Importance of Factors

Although the regression in Table 2 shows that a number of variables have a statistically significant influence in determining child poverty, as noted, some variables have far more effect than others do. Chart 2 shows the relative importance of each of the variables in explaining child poverty.[12] The numbers on the chart show, in general terms, how these variables affect time in poverty.

Time on welfare accounts for roughly half of the child poverty observed in the United States. By contrast, the number of children in the family is about one-fifth as powerful as a poverty determinant, accounting for about 11.5 percent of the variance in poverty among children.

As Chart 2 shows, time on welfare and time in single-parent families are overwhelmingly the strongest determinants of child poverty—51.1 percent and 22.7 percent, respectively. Together, they account for roughly three-quarters of the differences in child poverty explained by the model. The other variables play a more modest role, while race, as noted, has no significant, independent effect.

Estimated Effects of Variables on Child Poverty

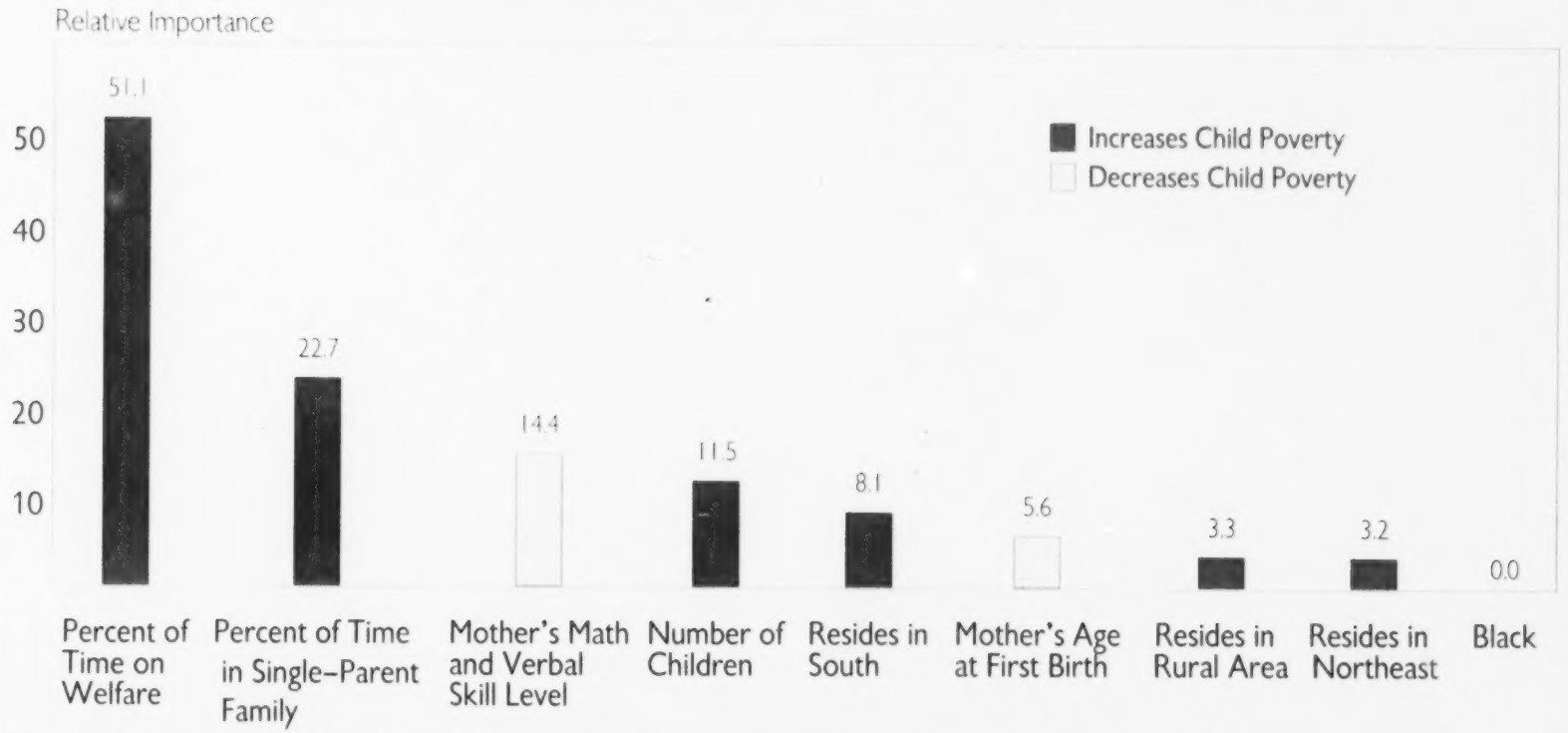
In order to estimate the concrete effects of each variable on child poverty, the authors reran the regression using only the nine independent variables shown to be significant in Table 2. The results of this modified regression are shown in Table 3. Holding the other independent variables constant, the results for each of the nine variables are as follows:

- A 10 percent increase in time on welfare leads to a 6.9 percentage point increase in a child's time in poverty.
- A 10 percent increase in time spent in a single-parent family leads to a 2.1 percentage point increase in a child's time in poverty.
- A 10 percent increase in a mother's math and verbal ability level leads to a 1.6 percentage point decrease in a child's time in poverty.
- An increase of one in the number of siblings in a family causes, on average, an increase of 3.1 percentage points in a child's time in poverty.
- Each additional year in the mother's age at first birth decreases a child's time in poverty by 0.38 percentage points. Thus, a child whose mother first gave birth at age 25 can expect to experience, *ceteris paribus*, 3.8 percent less time in poverty than can a child whose mother first gave birth 10 years younger at age 15.

11. Rural residence and residence in the Northeast are also slightly associated with higher child poverty; these are the only poverty-augmenting variables in which the white rate exceeds the black rate.
12. Chart 2 presents the standardized "Beta" coefficients from the regression in Table 2. The Beta coefficients can be used to gauge the relative importance of the variables in the model. Beta coefficients with higher coefficient values are more influential factors in explaining the dependent variable than those with lower values. See Marija Norusis, *SPSS 7.5 Guide to Data Analysis* (Upper Saddle River, N.J.: Prentice–Hall, 1997), pp. 458–459.

Chart 2 CDA 01-04

Relative Importance of Variables in Producing Child Poverty



Note: These results are standardized "Beta" coefficients that can be used to gauge the relative importance of variables in the model.

Source: Center for Data Analysis, The Heritage Foundation, and the Bureau of Labor Statistic, National Longitudinal Survey of Youth, 1979–96.

Table 3 CDA 01-04

Regression Analysis Using Only Significant Variables

Effects of Independent Variables

	Unstandardized Coefficients B	Std.Error	Standardized Coefficients Beta	t value	Significance
(constant)	7.890	1.139		6.928	0.000
Percent Time in Single-Parent Family	0.211	0.009	0.230	22.969	0.000
Percent Time on AFDC	0.688	0.014	0.512	49.100	0.000
Mother's Math and Verbal Skill Level	-0.164	0.011	-0.150	-15.529	0.000
Number of Children Ever Born	3.105	0.248	0.117	12.540	0.000
Number of Years at First Birth Above 15	-0.383	0.068	-0.057	-5.657	0.000
Percent Time Living in Northeast	0.024	0.007	0.029	3.341	0.001
Percent Time Living in South	0.054	0.006	0.079	8.946	0.000
Lives in Rural Area	2.079	0.583	0.029	3.565	0.000

Analysis of Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F value	Significance
Regression	13,280,108.674	8	1,660,013.584	1231.524	0.000
Residual	7,406,897.048	5495	1,347.934		
Total	20,687,005.722	5503		896.556	

Explanatory Power of Model

R	R Square	Std. Error of the Estimate
0.801	0.642	1161.006

Source: Center for Data Analysis WLS calculations of data from the National Longitudinal Survey of Youth, 1979-96.

- A 10 percent increase in time residing in the South increases a child's time in poverty, on average, by 0.5 percentage points.
- A 10 percent increase in time residing in the Northeast increases a child's time in poverty, on average, by 0.2 percentage points.[13]
- Residing in a rural area in the last year of the analysis increases poverty 2.1 percentage points.

In each case, the magnitude of the individual effects of each independent variable is determined by holding the other variables constant. This means, for example, that a child who has one sibling will, on average, experience 3.1 percent more poverty when compared to a child with no siblings who is identical with respect to the other independent variables.

Examples of Family Types

Table 4 shows the expected average time in poverty for children raised in various representative family situations. (The figures are based on the results of the modified regression model shown in Table 3.) Example 1 is an extremely poverty-prone family. The mother in this example has a below-average math and verbal ability level equal to the 25th percentile of the general population. (This is low for the general population but fairly typical for mothers living in poverty.)[14] There are four children in the family, and the mother gave birth to her first child at age 15. The family resides in a rural area in the South. The mother has never been married, and the family has been on welfare for 75

13. Residence in the South and residence in the Northeast are compared with the base or default condition of residing in the North Central region. Thus, a child who lived his whole live in the South would, on average, experience 5.4 percent more poverty than a child who always lived in the North Central region, other things being equal.

14. The median math and verbal skill level for mothers of children living in poverty in 1996 was the 19th percentile. Data taken from the NLSY.

percent of the time since the child was born. Children raised in these conditions, on average, would spend 96 percent of their lives in poverty.

Example 2, Case B, also represents a highly poverty-prone family, though the circumstances are less extreme than in Example 1. Again, the child has been born out of wedlock and the mother has not subsequently married. The mother has below-average math and verbal skill levels equal to the 25th percentile of the population. There are two children living in the family; the first child was born when the mother was 20 years old. The family lives in a city in the North Central United States. The family has been on AFDC for 25 percent of the time since the child was born. Children living in these circumstances typically would be in poverty some 46 percent of the time. This example is quite typical of the 9 percent of children who live with never-married mothers.

At the bottom of the table are poverty-resistant families. In Example 5, the mother was married at the time of the child's birth and has remained married throughout the child's life. There are two children in the family. The mother has an average math and verbal skill level (equal to the 50th percentile of the general population). The family lives in a city in the North Central United States and has never been on welfare. The average time in poverty for children raised in these conditions would be about 2 percent of the child's life. The majority of children raised in these circumstances would never experience poverty at all.

The importance of both single parenthood and welfare dependence in determining the level of child poverty is again obvious. A final point that should be reemphasized is that the average poverty rate for children in the various scenarios would not be affected by race. On average, the poverty rate would be the same for both white and black children raised in each of the family scenarios in Table 4.

THE LINKAGE BETWEEN SINGLE PARENTHOOD AND WELFARE DEPENDENCE

The determinant variables affecting poverty do not exist in isolation from each other. Families that have high scores on one factor that increases poverty are likely to possess high scores on other poverty-inducing factors as well. In particular, welfare dependence and single parenthood are closely intertwined. Welfare dependence is extremely rare among married couple families but is relatively common in single-parent families. Indeed, residing in a single-parent home could be considered almost a necessary precondition to long-term welfare dependence. This point is illustrated in Chart 3. The chart divides children into four groups.

1. **Out-of-Wedlock Never Married:** Children born out of wedlock whose mother has never married after the birth of the child. On average, children in this group have spent 44.5 percent of their lives on AFDC.
2. **Out-of-Wedlock Subsequent Marriage:** Children born out of wedlock whose mother married subsequent to the child's birth. On average, children in this group have spent 20.4 percent of their lives on AFDC.
3. **Within Wedlock Divorced:** Children born to married parents who later divorced. On average, children in this group have spent 10.7 percent of their lives on AFDC.
4. **Within Wedlock Marriage Intact:** Children born to parents who were married at the time of birth and have remained married. Children in this group, on average, have spent only 2.5 percent of their lives on AFDC.

Welfare dependence (receipt of AFDC benefits) is 1,700 percent more common among children residing with never-married mothers than among children born to married couples where the marriage has remained intact.

The linkage between single parenthood and welfare dependence is further illustrated in Chart 4. The first three groups (children of never-married mothers, children born out of wedlock with a subsequent marriage, and children born within wedlock whose parents later divorce) constitute broken or never-formed families. Children in these three groups represent 34 percent of all children within the NLSY. However, these same children comprise 85 percent of all time spent on welfare. By contrast, children born inside wedlock to parents whose marriage has remained intact consti-

Table 4: Child Poverty Rates for Representative Families

Children of Never–Married Mothers
(Mother has not been married at any time since the child was born)

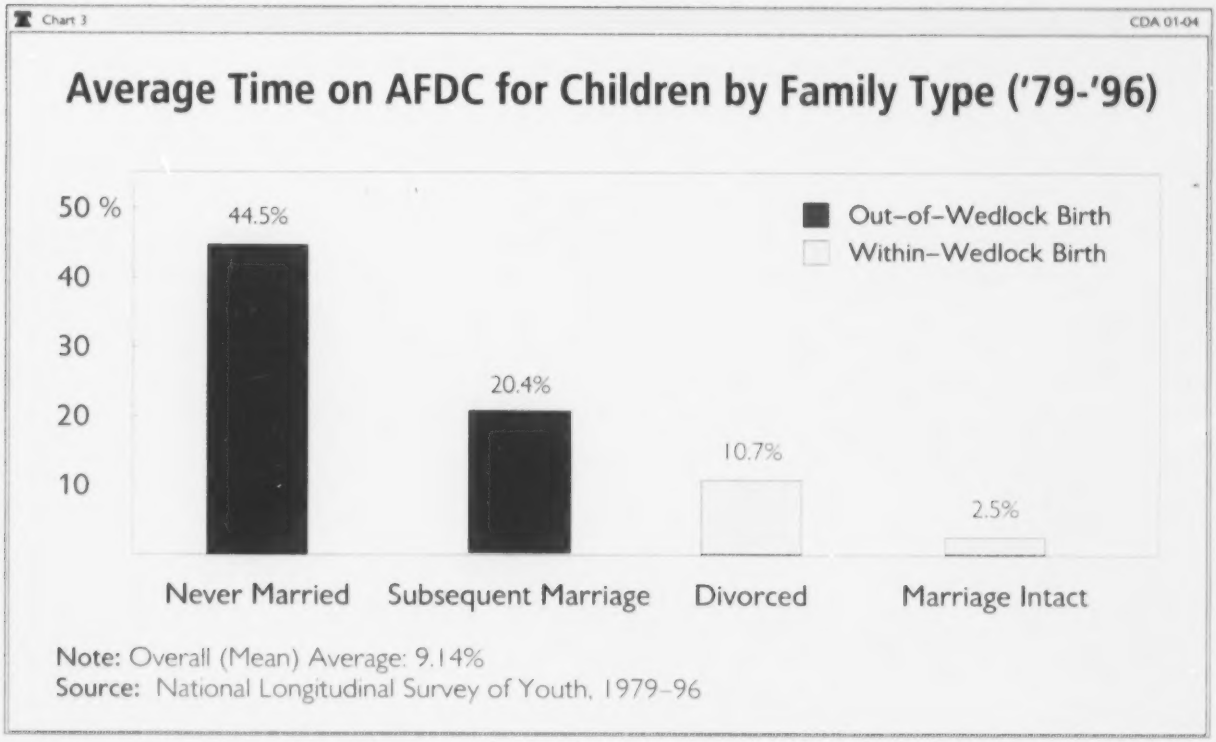
	Time in Poverty
Example 1) Never–married mother; four children in family; mother has below average math and verbal skills (=25th percentile); first child was born when mother was 15 years old; family lives in rural area in the South; family has been on AFDC in 75% of the years **since the child was born.**	96%
Example 2) Never–married mother; two children in family; mother has below average math and verbal skills (=25th percentile); first child was born when mother was 20 years old; family lives in a city in North Central U.S.:	
Case a) family on AFDC in 50% of years since the child was born	64%
Case b) family on AFDC in 25% of years since the child was born	46%

Children of Sometimes Married Mothers
(Mother has been married for part of the time since the child was born)

Example 3) Child has lived in a single–parent home for 50% of its life; two children in family; first child was born when mother was 25 years old; mother has average math and verbal skills (=50th percentile); family lives in a city in North Central U.S.:	
Case a) family on AFDC in 25% of years since the child was born	30%
Case b) family has never been on AFDC	13%

Children in Intact Families
(Mother and father have been married at all times since the child's birth)

Example 4) Mother has been married throughout the life of the child; two children in the family; mother has below average math and verbal skills (=25th percentile); first child was born when mother was 25 years old; family lives in a city in North Central U.S.	
Case a) family on AFDC in 5% of the years since the child was born	10%
Case b) family has never been on AFDC	6%
Example 5) Mother has been married throughout the life of the child; two children in the family; mother has average math and verbal skills (=50th percentile); first child was born when mother was 25 years old; family lives in a city in North Central U.S.; family has never been on AFDC	2%
Example 6) Mother has been married throughout the life of the child; two children in the family; mother has above average math and verbal skills (=75th percentile); first child was born when mother was 25 years old; family lives in a city in North Central U.S.; family has never been on AFDC	0%



tute two-thirds of all children in the NLSY but account for only 15 percent of all time on welfare.

Poverty and Racial Discrimination

Many argue that blacks have higher rates of child poverty because they are victims of pervasive racial discrimination. However, the fact that black children do not have higher poverty rates than whites raised in similar circumstances argues against that view. The reality that poverty rates are the same for black and white children raised in similar circumstances suggests that society treats both groups equally and that discrimination has no direct impact on poverty differences.

However, one could argue that while racial discrimination has no direct effect on poverty differences, it does have a substantial indirect effect. Those holding this view could maintain that past and present racial discrimination has played a strong role in producing the current high levels of single parenthood and welfare dependence among blacks. The higher levels of black single parenthood and dependence in turn yielded higher rates of black poverty.

According to this view, one could argue that racial discrimination has reduced the earnings capacity of black men relative to whites, and thus made marriage by black men less likely. The fact that black men are less likely to marry in turn contributes to the 69 percent black out-of-wedlock birth rate and the corresponding high child poverty rate.

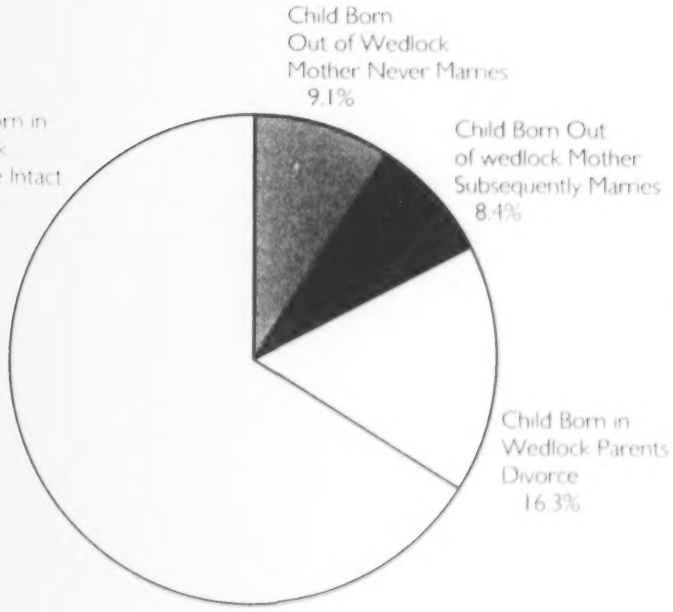
The historical evidence, however, weighs heavily against this view. For example, black male earnings today are more than four times higher than the wages of black men in 1940, after adjusting for inflation.[15] Similarly, black male wages have risen relative to white male wages, from 45 percent of white male wages in 1940 to some 80 percent today.[16]

Yet, despite their very low earnings in both absolute and relative terms, black men in 1940 had much higher marriage rates than do black men today. In 1940, 86 percent of black children were born inside marriage compared with 31 percent today. Thus, notwithstanding very low wages and restricted job opportunities, black men in ear-

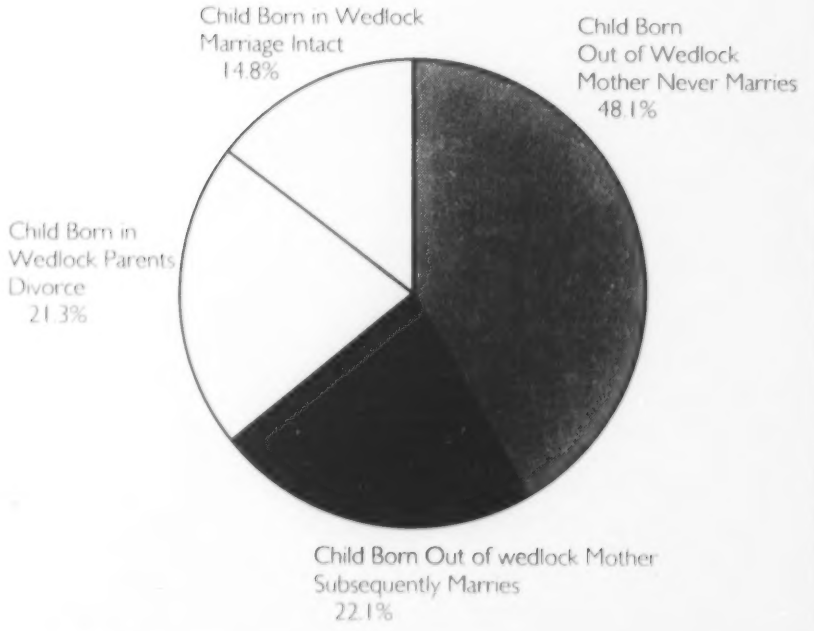
Chart 4 CDA 01-04

Family Structure and AFDC Receipt

Percent of all Children by Family Type



Percent of Total AFDC Dependence by Family Type



Source: National Longitudinal Survey of Youth, 1979–96.

lier periods maintained high rates of marriage, and black illegitimacy was quite low. As wages and job opportunities for black men increased, black marriage paradoxically declined and out-of-wedlock child-bearing increased greatly. It seems very difficult, therefore, to attribute the present high level of black single parenthood to low black male earnings induced by racial discrimination in the labor market.

One could similarly argue that racial discrimination in hiring limits the employment opportunities and earnings potential of black single mothers, and thus makes them more likely to be on welfare than whites. Heightened welfare dependence in turn yields higher poverty for black children. However, the wage rates of black women are virtually identical to those of white women who have the same amount of education, skill levels, and work experience.[17] The parity in earnings between similar black and white women is strong evidence that the labor market does not discriminate in favor of white women relative to black women. Racial discrimination in labor markets is thus largely ineffective as an explanation for the higher rates of welfare dependence among black as opposed to white single mothers.

Arguments about the long-term, indirect effects of racial discrimination on poverty remain complex and controversial. Nonetheless, one critical point about poverty remains clear and indisputable: Today, single parenthood and welfare dependence are the primary causes of child poverty. Whatever one's view about the underlying causes of the high current levels of single parenthood and dependence among blacks, it is evident that the present racial disparities in child poverty cannot be significantly reduced without reducing existing racial disparities in marriage and welfare dependence. Thus, while reasonable individuals might disagree about the underlying causes of the decline in marriage and the growth in welfare dependence, they can and should agree on the importance of reducing these social problems.

CONCLUSION

Child poverty is a continuing American problem. This report has examined the causes of child poverty and the factors that contribute to racial differences in child poverty. The analysis reveals that welfare dependence and single parenthood are the major underlying factors producing child poverty. Race *per se* is not a significant factor in directly increasing child poverty: Black children have the same poverty rate as white children who are raised in similar circumstances. Black children are more likely to be poor than white children primarily because they are more likely to live in single-parent homes and to be on welfare.

Those who are sincerely interested in reducing child poverty must focus on reducing the principal causes of that poverty: welfare dependence and single parenthood. Those interested in reducing the current disparities in black and white poverty must focus on altering the principal causes of that disparity: the higher levels of single parenthood and dependence among blacks.

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15. In 1940, the median annual black male wage and salary income was $460 per year. Adjusting for inflation, that would amount to around $5,340 today. In 1999, the median wage and salary income for black males who had worked at any point during the year was $23,209. U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 2* (Washington, D.C., 1975), pp. 304, 305. Data for 1999 from *http://www.census.gov/hhes/income/listing/p38b.html*. See also Robert D. Mare and Christopher Winship, "Socioeconomic Change and the Decline of Marriage for Blacks and Whites," in Christopher Jencks and Paul E. Peterson, eds., *The Urban Underclass* (Washington, D.C., Brookings Institution, 1991), pp. 155–175.
16. These figures are for full-time, full-year workers.
17. Based on analysis using NLSY data; results available from the authors.

APPENDIX: TECHNICAL SPECIFICATIONS

DATA

Data used in this analysis are taken from the National Longitudinal Survey of Youth (NLSY), produced by the U.S. Department of Labor's Bureau of Labor Statistics. The NLSY is a sample of 12,686 individuals between the ages of 14 and 22 in 1979. Every subsequent year or two, these individuals are re-interviewed and asked a series of follow-up questions. Data are collected on labor force participation, marriage, fertility, drug use, education, and program participation issues, among others. The answers to these questions help researchers ascertain the demographic and economic choices of young people born in the late 1950s to early 1960s.

Since marriage and fertility issues are of great importance to young people, a variety of questions on specific dates and times of marriage, divorce, and childbirth are asked. As the children of the NLSY sample aged, separate questions were asked beginning in 1986. Data from both the original NLSY cohort and the NLSY child and young adult data set (NLSY–C) are used in this analysis, with information from the interviews in years 1979 to 1996. (At the time of publication, 1998 NLSY data had been released, but this extra interview year has not been included in the analysis.)

MODEL AND SPECIFICATION

The model presented in this report is a weighted least squares linear regression model often used in social and economic research.[18] A weighted regression is used to help correct for stratifications made in the sample design. For example, the NLSY has a low-income oversample (one of several stratifications) embedded within the survey. Because the actual percentage of low-income individuals in the population is relatively small but the survey designers are interested in the behavior of these individuals in particular, there are more individuals among the NLSY survey participants as a proportion than there appear in the overall population. Thus, the survey designers assign a sampling weight to the individuals in the NLSY to take into consideration the sampling design.

As noted above, this analysis utilizes data from the children of the original NLSY; it also utilizes information from their mothers to ascertain what is associated with a child's time spent in poverty. To construct the dependent variable, the weighted least squares model uses data on the percentage of time a child will spend below the official poverty line from his or her birth up to 1996. The NLSY has poverty variables for each year the survey was administered, and these annual data provide the basis for the percent time in poverty dependent variable. The technical definitions of the independent variables for the final model (Table 3) are as follows.

- **Percent Time Spent in a Single-Parent Family:** Within the main section of the NLSY, there is an "event history" database that shows when the parents married and divorced. In the NLSY–C (child and young adult questionnaires), there are dates of birth. From these data, we know how much time, in months, is spent in a two-parent versus a single-parent family.
- **Percent Time Spent on AFDC:** The time a family spends on government assistance/Aid to Families with Dependent Children (AFDC) has a direct bearing on the length of time a child will be in poverty.

  Some may argue that the direction of the relationship may be in question (time on welfare influencing time in poverty versus time in poverty influencing time in welfare). To validate the model specification statistically, analysts in the Center for Data Analysis conducted a series of statistical tests of these hypotheses. The statistical test included the time on welfare variable first on the right-hand side of the

18. A full description of the theoretical basis of the regression model may be found in such textbooks as Thomas H. and Ronald J. Wonnacott, *Regression: A Second Course in Statistics* (New York: John Wiley & Sons, 1981), and William H. Greene, *Econometric Analysis*, Third Edition (Upper Saddle River, N.J.: Prentice–Hall, 1997).

weighted least squares equation (independent variable) and the time in poverty variable as the dependent variable on the left-hand side. This is the manner in which the equation is originally specified. As a secondary test, the positions of the two variables were reversed (time in poverty now on the right-hand side and time on welfare on the left).

The results were revealing. The inference of time on welfare influencing time in poverty is much more statistically robust, in terms of explanatory power, than the alternative hypothesis. Thus, the original specification of time on welfare influencing time in poverty is retained.

- **Mother's Math and Verbal Skill Level:** In 1980, NLSY sample members were given the Armed Forces Qualifying Test (AFQT).[19] It measures basic academic ability.
- **Number of Children Ever Born to Mother:** By 1996, the mothers in the NLSY survey are in their late thirties at least, exceeding their prime birthing years. This measure should therefore be reasonably close to the total number of children born to this cohort of mothers.
- **Number of Years Past Age 15 for First Birth of Mother:** This variable posits the notion that younger mothers typically have more financial challenges than do older, more established mothers, even if married. Operationally, this variable is defined by subtracting 15 from the age of the woman at childbirth. For example, a woman who gave birth to her first child at 20 would have a variable value of 5. The 15-year-old figure was chosen because that is the age used on government labor surveys for entering the labor force.
- **Regional Variables:** These variables measure the percentage of the child's life spent in different regions.
- **Lives in a Rural Area:** This variable determines whether there exists an urban–rural gap in poverty in the last year of the survey.
- **Race Variables:** In the first model specification (Table 2), the race of the mother was added. As noted in the report, race variables are not statistically significant at any major level, the general standard being at least a 95 percent level (in this case, the variable was not even significant at a 90 percent level).[20] The variables were therefore excluded from the final model specification (similarly, the West regional variable was excluded from the analysis). Significance is determined by critical t values (also known as a t-test).[21]

All percentage-based variables (e.g., percent time in poverty, percent time on AFDC) are represented as whole percentages rather than decimals (e.g., 24.5 rather than .245) for consistency within the results. Such a convention, however, does nothing to change the interpretation of the results.

Eliminating variables from the first model (Table 2) to the second (Table 3) occurred through an analysis of the t-test. If the significance level associated with the t value rose above .10 (or, conversely, fell below 90 percent), the variable was excluded from the final model. Thus, both of the race variables and the West regional variable were stricken from the final model.

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19. In 1989, the NLSY revised the calculation of the AFQT score to follow what the Department of Defense does. The revision does not alter the basic results of the analysis. See Center for Human Resource Research, Ohio State University, *NLS Users' Guide* (Columbus, Ohio: Center for Human Resource Research, 1994), p. 124.

20. See Michael Lewis-Beck, *Applied Regression: An Introduction* (Beverly Hills, Cal.: Sage Publications, 1980); from Sage Publications' *Quantitative Applications in the Social Sciences*, Series No. 07–022. If a variable is not statistically significant, it means that the variable has no statistically discernable difference between the coefficient value and zero, so there is no effect.

21. See Greene, *Econometric Analysis*, p. 265, for a basic discussion of t-tests and t distributions.

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